REMARKS

Claims 13 and 14 currently appear in this application. The Office Action of November 24, 2003, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicants respectfully request favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Rejections under 35 U.S.C. 112

Claim 13 recites the limitation "the DNA array." There is said to be insufficient antecedent basis for this limitation in the claim. Further, in claim 13 the recitation "the series of genes identified in step (f) is said to lack antecedent basis.

Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, s being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 13-14 recite the term "may" in step (c), which is unclear and indefinite.

This rejection is respectfully traversed. Claims 13 and 14 have been amended to clarify the invention for which patent protection is sought. Support for these amendments can be found in the specification as filed at page 39, line 8 to page 40, line 8.

Claim 14 is amended to recite "to the" in step (b) in place of "tote."

Antecedent basis for "the DNA array" can be found in step (c) in claim 13 as amended. Antecedent basis for the amended recitation "the genes identified in step (e)" can be found in step (e) in claim 13.

Claims 13 and 14 as amended do not contain the term "may."

Art Rejections

Claims 13-14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Friend et al. in view of Stoughton et al.

This rejection is respectfully traversed. According to the invention as defined by claim 13 or 14, a DNA array is

used onto which DNA the specific set of genes, that is, genes selected to comprise at least one gene for each of the respective groups (1) to (17) are immobilized.

The DNA array is used according to the claimed method for determining a signal transduction pathway that is influenced by an endocrine disrupting activity of a test substance (claim 13) or for determining a substance that causes endocrine disruption in a manner similar to an endocrine disruptor (claim 14).

Friend et al. describe a method for preparing microarrays (column 29, line 14 to column 30, line 45). In this section of the patent, Friend et al. describe as follows: "in a preferred embodiment the microarray contains binding sites for products of al or almost all genes in the target organism's genome... usually the microarray will have binding sites corresponding to at least about 50% of the genes in the genome..." (column 29, lines 30-37).

Stoughton et al. describe a method for preparing microarrays (column 44, line 60 to column 46, line 25) where a similar description can be found (column 45, lines 9-16).

That is, the cited reference teach the use of a microarray onto which a large number of unspecified genes are immobilized, and do not teach a DNA onto which only a specified set of genes are immobilized. Generally, if a microarray onto which a large number of genes are immobilized is used for analyzing gene expression, a long period of time is required for the analyses because of the vast data involved, and the accuracy may be low. In contrast thereto, use of a DNA array onto which only a specified set of genes are immobilized according to the present invention makes it possible to conduct rapid and accurate analyses. Thus, the claimed invention is an improvement over the assays disclosed in Friend et al. and Stoughton et al. in that it provides rapid, accurate analyses.

Furthermore, Friend et al. do not specifically teach determining signal transduction pathway genes, and Stoughton et al. teach a general method for identifying signal transduction pathway genes.

The cited references neither teach nor suggest using a DNA array having a specific set of genes for determining a signal transduction pathway that is influenced by an endocrine disrupting activity of a test substance, or for determining a

substance that causes endocrine disruption in a manner similar to that of an endocrine disruptor. It is by using the specific genes recited in claims 13 and 14 that the present invention produces a rapid an accurate method for determining endocrine disrupting of a test substance or for determining a substance that causes endocrine disruption in a manner similar to that of an endocrine disruptor.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By _____
Anne M. Kornbau
Registration No. 25,884

AMK:msp
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
G:\BN\A\Aoyb\kondo7\pto\15APR04amd.doc